



TG/175/4

ORIGINAL: English

DATE: 2019-10-29

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

KANGAROO PAW*

UPOV Code(s):

ANIGO;
MACPI_FUL*Anigozanthos* Labill.;
Macropidia fuliginosa (Hook.) Druce

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative names:*

Botanical name	English	French	German	Spanish
<i>Anigozanthos</i> Labill., <i>Anigosanthos</i> Lemée, orth. var., <i>Macropidia</i> J. Drumm. ex Harv.	Kangaroo Paw	Anigozanthos	Känguruhblume	Anigozanthos
<i>Macropidia fuliginosa</i> (Hook.) Druce, <i>Anigozanthos</i> <i>fuliginosus</i> Hook.	Black kangaroo-paw			

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Anigozanthos* Labill. and *Macropidia fuliginosa* (Hook.) Druce.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of young plants.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

10 plants

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 *Number of Growing Cycles*

The minimum duration of tests should normally be a single growing cycle.

3.2 *Testing Place*

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness".

3.3 *Conditions for Conducting the Examination*

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

3.3.2 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background. The color chart and version used should be specified in the variety description.

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 10 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 *Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 *Distinctness*

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of Plants or Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 9 plants or parts of plants taken from each of 9 plants and any other observations made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the Table of Characteristics (see document TGP/9 "Examining Distinctness", Section 4 "Observation of characteristics"):

MG: single measurement of a group of plants or parts of plants

MS: measurement of a number of individual plants or parts of plants

VG: visual assessment by a single observation of a group of plants or parts of plants

VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

"Visual" observation (V) is an observation made on the basis of the expert's judgment. For the purposes of this document, "visual" observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

4.2 *Uniformity*

- 4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:
- 4.2.2 These Test Guidelines have been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation, the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species" Section 4.5 "Testing Uniformity" should be followed.
- 4.2.3 For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, 1 off-type is allowed.

4.3 *Stability*

- 4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.
- 4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

- 5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.
- 5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.
- 5.3 The following have been agreed as useful grouping characteristics:
- (a) Plant: height (characteristic 1)
 - (b) Inflorescence: ramification (characteristic 8)
 - (c) Perianth tube: color (characteristic 15)
 - (d) Perianth lobes: reflexing (characteristic 20)
- 5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 "Examining Distinctness".

6. Introduction to the Table of Characteristics

6.1 *Categories of Characteristics*

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 *States of Expression and Corresponding Notes*

6.2.1 States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 "Development of Test Guidelines".

6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

	English			français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	2	3	4	5	6	7		
	Name of characteristics in English			Nom du caractère en français		Name des Merkmals auf Deutsch		Nombre del carácter en español
	states of expression			types d'expression		Ausprägungsstufen		tipos de expresión

1 Characteristic number

2 (*) Asterisked characteristic – see Chapter 6.1.2

3 Type of expression

QL

Qualitative characteristic – see Chapter 6.3

QN

Quantitative characteristic – see Chapter 6.3

PQ

Pseudo-qualitative characteristic – see Chapter 6.3

4 Method of observation (and type of plot, if applicable)

MG, MS, VG, VS

– see Chapter 4.1.5

5 (+) See Explanations on the Table of Characteristics in Chapter 8.2

6 (a)-(c) See Explanations on the Table of Characteristics in Chapter 8.1

7 Not applicable

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (*)	QN	MG/VG	(+)					
	Plant: height		Plante : hauteur		Pflanze: Höhe	Planta: altura		
	short		basse		niedrig	baja	Firefly, Rambueleg	3
	medium		moyenne		mittel	media	Bush Spark, Dwarf Delight	5
	tall		haute		hoch	alta	Kings Park Federation Flame	7
2. (*)	QN	VG						
	Plant: number of inflorescences		Plante : nombre d'inflorescences		Pflanze: Anzahl Blütenstände	Planta: número de inflorescencias		
	few		petit		gering	bajo	Rambocity, Regal Claw	3
	medium		moyen		mittel	medio	Rambueleg, Regal Red	5
	many		grand		groß	alto	Lilac Queen, Red Cross	7
3.	QN	MG/VG		(a)				
	Leaf: length		Feuille : longueur		Blatt: Länge	Hoja: longitud		
	short		courte		kurz	corta	Bush Ranger, Firefly	3
	medium		moyenne		mittel	mediana	Kings Park Federation Flame, Velvet Harmony	5
	long		longue		lang	larga	Amber Velvet, Red Cross	7
4.	QN	MG/VG	(+)	(a)				
	Leaf: width		Feuille : largeur		Blatt: Breite	Hoja: anchura		
	narrow		étroite		schmal	estrecha	Bush Pearl, Pink Joey	3
	medium		moyenne		mittel	media	Bush Ranger, Ruby Jools	5
	broad		large		breit	ancha	Rambueleg, Red Cross	7
5. (*)	QN	VG	(+)	(a)				
	Leaf: attitude		Feuille : port		Blatt: Haltung	Hoja: porte		
	erect		dressé		aufrecht	erecto	Kings Park Federation Flame, Joey Rouge	1
	semi erect		demi-dressé		halbaufrecht	semierecto	Bush Spark, Twilight	2
	semi erect to horizontal		demi-dressé à horizontal		halbaufrecht bis waagerecht	semierecto a horizontal	Pixie Paw	3

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.	QN	VG	(a)				
	Leaf: glaucosity	Feuille : glaucescence	Blatt: Bereifung	Hoja: glaucescencia			
	weak	faible	gering	leve	Gold Velvet	1	
	medium	moyenne	mittel	media	Bush Games	2	
	strong	forte	stark	intensa	Bush Emerald, Rambudan	3	
7. (*)	QN	VG	(a)				
	Leaf: hairiness of margin	Feuille : pilosité du bord	Blatt: Behaarung des Randes	Hoja: velloidad del borde			
	absent or weak	absente ou faible	fehlend oder gering	ausente o leve	Gold Velvet	1	
	medium	moyenne	mittel	media	Bush Illusion	2	
	strong	forte	stark	intensa	Rambubona	3	
8. (*)	QL	VG	(+)				
	Inflorescence: ramification	Inflorescence : ramification	Blütenstand: Verzweigung	Inflorescencia: ramificación			
	absent	absente	fehlend	ausente	Bush Emerald, Bush Games	1	
	primary	primaire	einfach	primaria	Bush Nugget, Bush Ranger	2	
	secondary	secondaire	zweifach	secundaria	Bush Glow, Gold Velvet	3	
	tertiary	tertiaire	dreifach	terciaria	Bush Ember, Bush Spark	4	
9. (*)	QN	MG/VG	(+)				
	Inflorescence: length of lowest lateral branch	Inflorescence : longueur de la pousse latérale la plus basse	Blütenstand: Länge des untersten Seitenzweiges	Inflorescencia: longitud de la rama lateral más baja			
	very short	très courte	sehr kurz	muy corta		1	
	short	courte	kurz	corta	Yellow Gem	3	
	medium	moyenne	mittel	media	Gold Velvet	5	
	long	longue	lang	larga		7	
	very long	très longue	sehr lang	muy larga	Black Velvet	9	
10. (*)	QN	VG	(+)				
	Inflorescence: number of flowers	Inflorescence : nombre de fleurs	Blütenstand: Anzahl Blüten	Inflorescencia: número de flores			
	few	petit	gering	bajo	Bush Emerald, Bush Games	3	
	medium	moyen	mittel	medio	Dwarf Delight, Rambocano	5	
	many	grand	groß	alto	Bush Spark, Red Cross	7	

	English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11.	PQ	VG								
	Pedicel: color of hairs	Pédicelle : couleur des poils	Blütenstiel: Farbe der Haare	Pedículo: color de la vellosidad						
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)						
12.	QN	MG/VG	(+)	(b)						
	Perianth tube: length	Tube du périanthe : longueur	Kronröhre: Länge	Tubo del perianto: longitud						
	short	court	kurz	corta	Pixie Paw, Rambueleg					3
	medium	moyen	mittel	media	Joey Rouge, Rambudan					5
	long	long	lang	larga	Bush Emerald, Bush Games					7
13.	QN	MG/VG	(+)	(b)						
	Perianth tube: width	Tube du périanthe : largeur	Kronröhre: Breite	Tubo del perianto: anchura						
	narrow	étroit	schmal	estrecha	Amber Velvet, Velvet Harmony					3
	medium	moyen	mittel	media	Dwarf Delight, Rambudan					5
	broad	large	breit	ancha	Bush Games, Space Age					7
14. (*)	PQ	VG	(+)							
	Perianth tube: profile	Tube du périanthe : profil	Kronröhre: Profil	Tubo del perianto: perfil						
	flared distally	évasé à l'extrémité distale	am distalen Ende verbreitert	ensanchado en el extremo distal	Early Spring, Gold Velvet					1
	broadening evenly	élargissement régulier	gleichmäßig verbreitert	ensanchado uniformemente	Bush Ranger					2
	constricted medially	étranglé au milieu	in der Mitte verengt	estrechado en el medio	Bush Emerald, Mini Red					3
	parallel	parallèle	parallel	paralelo	Ramboball					4
	expanded medially	élargi au milieu	in der Mitte verbreitert	ensanchado en el medio	Rambudan					5
15. (*)	PQ	VG	(+)							
	Perianth tube: color	Tube du périanthe : couleur	Kronröhre: Farbe	Tubo del perianto: color						
	green	vert	grün	verde	Joey Fireworks					1
	yellow	jaune	gelb	amarillo	Gold Velvet					2
	orange	orange	orange	naranja	Amber Velvet					3
	pink	rose	rosa	rosa	Bush Pearl					4
	red	rouge	rot	rojo	Bush Inferno					5
	purple	pourpre	purpurn	púrpuro	Rambodiam					6
	black	noir	schwarz	negro						7

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
16.	QN	VG	(c)				
	Perianth tube hair: number of colors	Pilosité du tube du périanthe : nombre de couleurs	Kronröhrenhaare: Anzahl Farben	Pelo del tubo del perianto: número de colores			
	one	une	eine	uno	Bush Ochre	1	
	two	deux	zwei	dos	Bush Nugget	2	
	three	trois	drei	tres	Bush Ember	3	
17.	PQ	VG	(c)				
	Perianth tube hair: color of upper third	Pilosité du tube du périanthe : couleur du tiers supérieur	Kronröhrenhaare: Farbe des oberen Drittels	Pelo del tubo del perianto: color del tercio superior			
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)			
18.	PQ	VG	(c)				
	Perianth tube hair: color of middle third	Pilosité du tube du périanthe : couleur du tiers médian	Kronröhrenhaare: Farbe des mittleren Drittels	Pelo del tubo del perianto: color del tercio central			
	yellowish white	blanc jaunâtre	gelblichweiß	blanco amarillento	Rambodiam	1	
	green	vert	grün	verde	Rambudan	2	
	yellow	jaune	gelb	amarillo	Rambubona	3	
	orange	orange	orange	naranja	Kings Park Federation Flame	4	
	red	rouge	rot	rojo	Ramboball	5	
	reddish purple	pourpre rougeâtre	rötlichpurpurn	púrpuro rojizo	Rambueleg	6	
	greyed purple	pourpre grisâtre	graupurpurn	púrpuro grisáceo	Regal Velvet	7	
	black	noir	schwarz	negro	Black Velvet	8	
19.	QN	VG	(+)				
	Perianth lobe: length	Lobe du périanthe : longueur	Kronlappen: Länge	Lóbulo del perianto: longitud			
	short	court	kurz	corta	Rambueleg	1	
	medium	moyen	mittel	media	Gold Velvet	2	
	long	long	lang	larga	Ramboblitz	3	

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. (*)	QN	VG	(+)				
	Perianth lobes: reflexing	Lobes du périanthe : courbure	Kronlappen: Zurückbiegung	Lóbulos del perianto: curvatura			
	absent or very weak	absente ou très faible	fehlend oder sehr gering	nula o muy leve	Bush Pearl, Bush Surprise	1	
	weak	faible	gering	leve	Bush Glow, Bush Ranger	3	
	medium	moyenne	mittel	media	Rambubona	5	
	strong	forte	stark	marcada	Amber Velvet	7	
	very strong	très forte	sehr stark	muy marcada	Rambudan, Red Cross	9	
21. (*)	QL	VG	(+)				
	Flower: number of anthers at top of perianth	Fleur : nombre d'anthers en haut du périanthe	Blüte: Anzahl Antheren an der Spitze der Krone	Flor: número de anteras en el extremo del perianto			
	two	deux	zwei	dos	Firefly, Bush Spark	1	
	four	quatre	vier	cuatro	Pixie Paw, Rambubona	2	
	six	six	sechs	seis	Amber Velvet, Ruby Jools	3	
22.	PQ	VG					
	Ovary: color of hairs	Ovaire : couleur des poils	Fruchtknoten: Farbe der Haare	Ovario: color de la vellosidad			
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)			
23.	QN	VG	(+)				
	Flower: position of stigma in relation to anthers	Fleur : position des stigmates par rapport aux anthères	Blüte: Position der Narbe im Verhältnis zu den Antheren	Flor: posición del estigma en relación con las anteras			
	below	en dessous	unterhalb	por debajo	Firefly, Rambubona	1	
	same level	au même niveau	auf gleicher Höhe	al mismo nivel	Pixie Paw	2	
	above	au-dessus	oberhalb	por encima		3	
24.	QN	VG	(+)				
	Time of beginning of flowering	Époque de début de floraison	Zeitpunkt des Blühbeginns	Época de inicio de la floración			
	early	précoce	früh	temprana	Amber Velvet	3	
	medium	moyenne	mittel	intermedia	Rambubona	5	
	late	tardive	spät	tardía	Ramboneer	7	

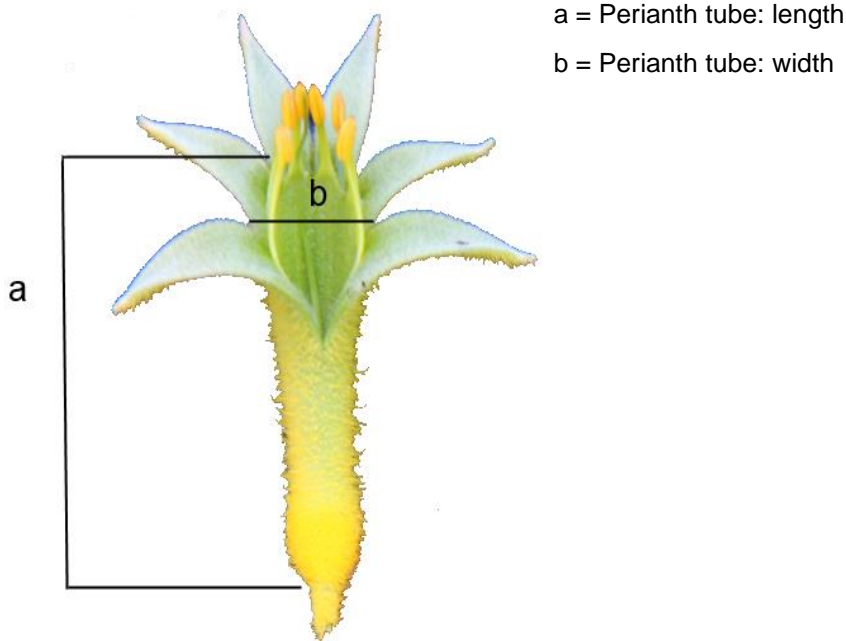
8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

Unless otherwise indicated, all observations should be made at the time of full flowering.

Characteristics containing the following key in the Table of Characteristics should be examined as indicated below:

- (a) Observations should be made on a fully expanded leaf from the middle third of the rosette.
- (b)



- (c) The individual hairs on the perianth tube may have up to three colors.

8.2 *Explanations for individual characteristics*

Ad. 1: Plant: height

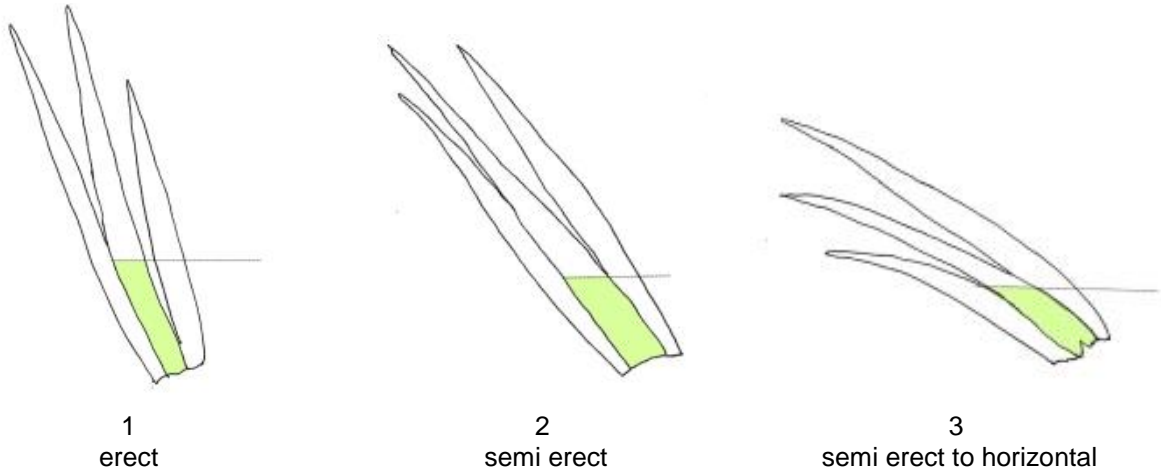
Observed including inflorescences.

Ad. 4: Leaf: width

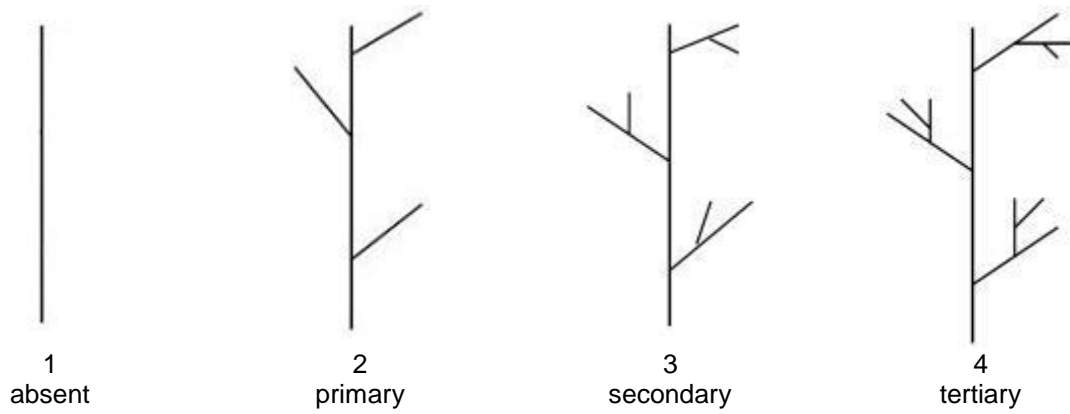
Observed at the widest point.

Ad. 5: Leaf: attitude

Observed on the basal third of the leaf.



Ad. 8: Inflorescence: ramification



Ad. 9: Inflorescence: length of lowest lateral branch



Ad. 10: Inflorescence: number of flowers

The number of flowers on the inflorescence should be determined only on flowers longer than 3 mm.

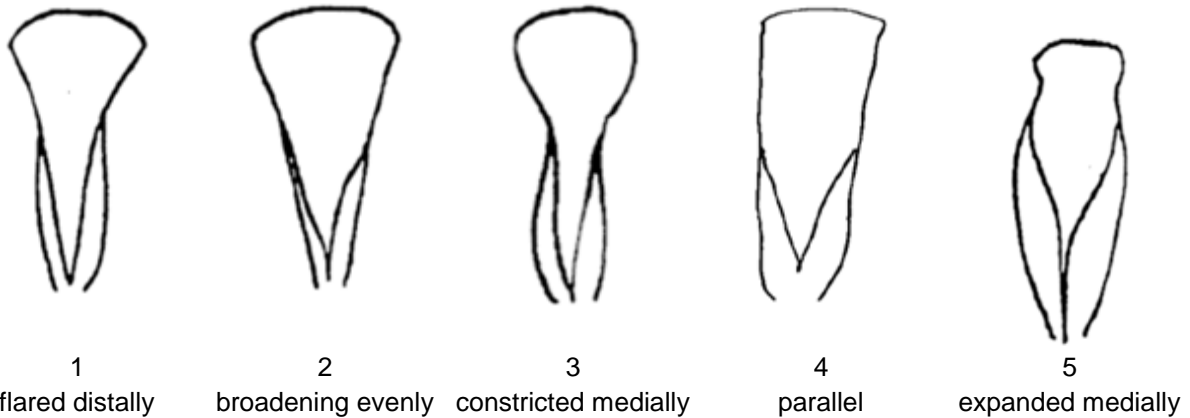
Ad. 12: Perianth tube: length

The distance from the base of the perianth tube to the base of the uppermost perianth lobe should be observed.

Ad. 13: Perianth tube: width

Cross sectional width of the perianth tube should be observed at the base of the perianth lobes.

Ad. 14: Perianth tube: profile



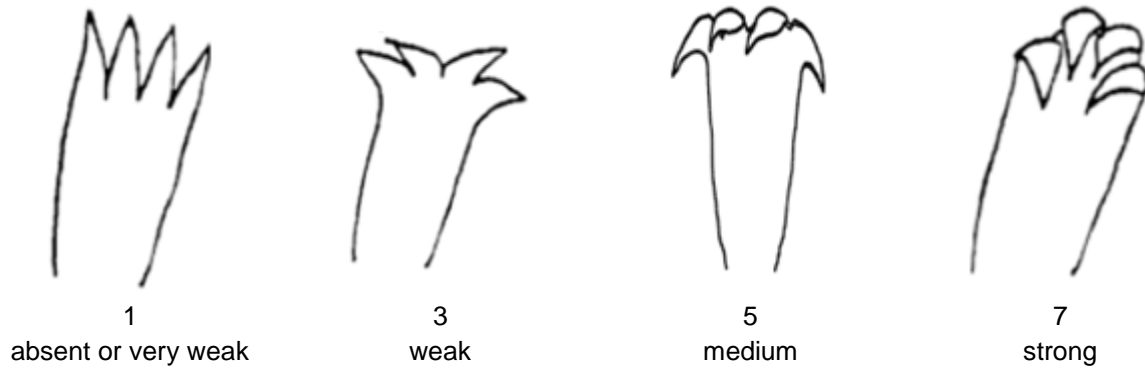
Ad. 15: Perianth tube: color

The overall impression of color should be observed.

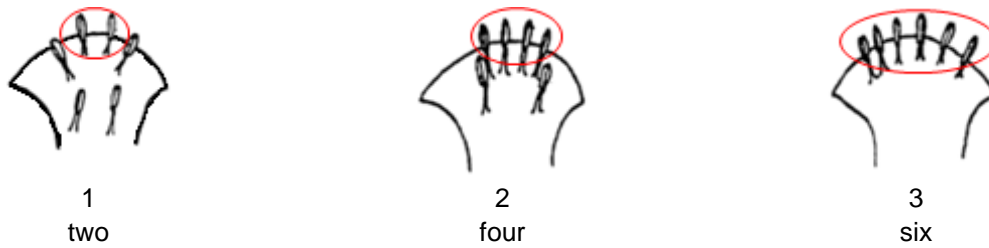
Ad. 19: Perianth lobe: length

The longest lobe should be observed.

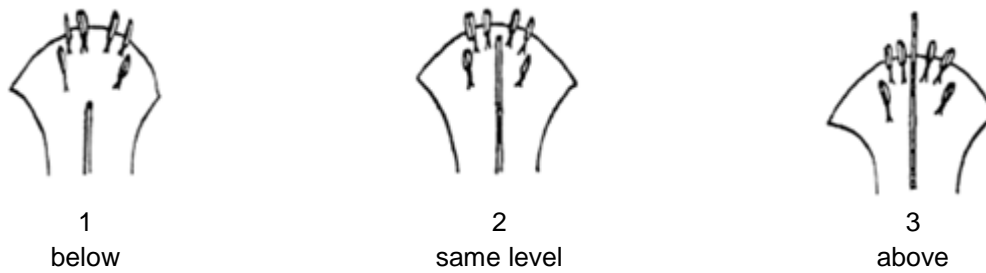
Ad. 20: Perianth lobes: reflexing



Ad. 21: Flower: number of anthers at top of perianth



Ad. 23: Flower: position of stigma in relation to anthers



Ad. 24: Time of beginning of flowering

The time of beginning of flowering is reached when at least 4 out of 10 plants have at least one open flower.

9. Literature

Records of the Australian Cultivar Registration Authority, Australian National Botanical Gardens, Canberra, AU. <https://www.anbg.gov.au/acra/>

Elliot and Jones, 1982: Encyclopedia of Australian Plants Suitable for Cultivation, Vol 2, Lothian, Melbourne, AU.

Marchant et al., 1987: Flora of the Perth Region," West Australian Herbarium, Department of Agriculture, AU.

Wrigley J, 1988: Australian Native Plants: A Manual for their Propagation, Cultivation and Use in Landscaping, AU.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1. Subject of the Technical Questionnaire		
1.1.1	Botanical name	<input type="text" value="Anigozanthos Labill."/> []
1.1.2	Common name	<input type="text" value="Kangaroo Paw"/>
1.1.3	Species	<input type="text"/>
1.2.1	Botanical name	<input type="text" value="Macropidia fuliginosa (Hook.) Druce"/> []
1.2.2	Common name	<input type="text" value="Black kangaroo-paw"/>
2. Applicant		
	Name	<input type="text"/>
	Address	<input type="text"/>
	Telephone No.	<input type="text"/>
	Fax No.	<input type="text"/>
	E-mail address	<input type="text"/>
	Breeder (if different from applicant)	<input type="text"/>
3. Proposed denomination and breeder's reference		
	Proposed denomination (if available)	<input type="text"/>
	Breeder's reference	<input type="text"/>

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross
(please state parent varieties)

(.....) x (.....)
female parent male parent

(b) partially known cross
(please state known parent variety(ies))

(.....) x (.....)
female parent male parent

(c) unknown cross

4.1.2 Mutation
(please state parent variety)

4.1.3 Discovery and development
(please state where and when discovered and how developed)

4.1.4 Other
(Please provide details)

Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4.2	Method of propagating the variety	
4.2.1	Vegetative propagation	
(a)	Cuttings	[]
(b)	<i>In vitro</i> propagation	[]
(c)	Division	[]
(d)	Other (state method)	[]
4.2.2	Other (Please provide details)	[]
	<input type="text"/>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Plant: height (1)		
very short		1 []
very short to short		2 []
short	Firefly, Rambueleg	3 []
short to medium		4 []
medium	Bush Spark, Dwarf Delight	5 []
medium to tall		6 []
tall	Kings Park Federation Flame	7 []
tall to very tall		8 []
very tall		9 []
5.2 Inflorescence: ramification (8)		
absent	Bush Emerald, Bush Games	1 []
primary	Bush Nugget, Bush Ranger	2 []
secondary	Bush Glow, Gold Velvet	3 []
tertiary	Bush Ember, Bush Spark	4 []
5.3 Perianth tube: color (15)		
green	Joey Fireworks	1 []
yellow	Gold Velvet	2 []
orange	Amber Velvet	3 []
pink	Bush Pearl	4 []
red	Bush Inferno	5 []
purple	Rambodiam	6 []
black		7 []
5.4 Perianth lobes: reflexing (20)		
absent or very weak	Bush Pearl, Bush Surprise	1 []
very weak to weak		2 []
weak	Bush Glow, Bush Ranger	3 []
weak to medium		4 []
medium	Rambubona	5 []
medium to strong		6 []
strong	Amber Velvet	7 []
strong to very strong		8 []
very strong	Rambudan, Red Cross	9 []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>Example</i>	<i>Perianth tube: color</i>	<i>green</i>	<i>yellow</i>
Comments:			

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [] No []

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [] No []

(If yes, please provide details)

7.3 Other information

A representative color photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

- Indication of the date and geographic location
- Correct labeling (breeder's reference)
- Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)"

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (<http://www.upov.int/tgp/en/>).

[The link provided may be deleted by members of the Union when developing authorities' own test guidelines.]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

If the answer to (b) is yes, please attach a copy of the authorization.

9. Information on plant material to be examined or submitted for examination

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a) Microorganisms (e.g. virus, bacteria, phytoplasma)	Yes []	No []
(b) Chemical treatment (e.g. growth retardant, pesticide)	Yes []	No []
(c) Tissue culture	Yes []	No []
(d) Other factors	Yes []	No []

Please provide details for where you have indicated "yes".

.....

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant's name

Signature Date

[End of document]